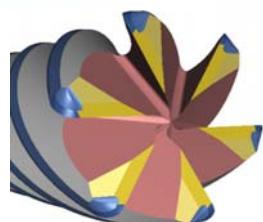


## Endmill Cutter Head Ø12 Z6 R1

A01-110

The OD of this corner radius endmill cutter head is ground with radial relief in order to achieve on a thin primary clearance as similar as a cylindrical land. The corner radius is therefore ground as a single operation with 2 clearances, as well as the end. Due to high spiral angle a radius correction with the gashing operation is necessary. The orientation of a reference notch on the shank is probed using a special probe option.



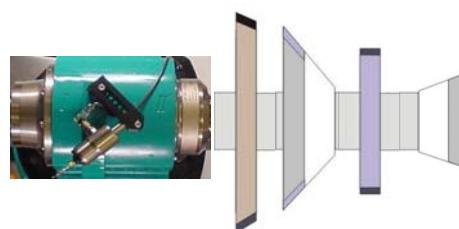
### 1. Cycletime for Production

Workpiece:	Ø 12 mm, Z 6, Length 8.5 mm, Helix 45° Material CARBIDE									
Operations	Probe notch	Flute 1	Gash straight	Gash radcorr	O.D.2	O.D.1	End 2	End 1	Radius 2	Radius 1
Feed [mm/Min]	2000	80	100	150	170	220	60	120	150	180
Power [kW]		3	2	1	1	2	1	1	4	3
Cutting feed [m/s]		20	22	22	22	22	22	22	22	22
Used wheels		1	2	2	3	3	4	4	4	4
Grinding time [s]	20	122	118	53	83	75	57	41	70	66
Total cycle time	11 Min 45									

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

### 2. Used Grinding Wheels

1	1V1 Ø125 D64
2	12V9 Ø125 D64
3	1A1 Ø100 D46
4	11V9 Ø75 D46



1 2 3 4

### 3. Machine and Software Requirements

Machines: 5 axes CNC grinders : GEM DMR

Control: Fanuc 160i

Accessories:

Responsible engineer: OP. 30.11.09

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